

SECTION 13070
CLEANROOM PASS-THROUGH

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions apply to this Section.

1.2 SUMMARY:

- A. Section Includes:
 - 1. This section specifies the general requirements for a self-contained, factory fabricated stainless steel wall pass through closed on both sides by airtight doors, complete with appropriate hardware, anchors, and accessories.

1.3 REFERENCES/PROJECT REQUIREMENTS

- A. Requirements of the following Project Specification Sections apply to this section:
 - 1. Section 01110 – Cleanroom Construction Protocol
 - 2. Section 01111 – Cleanroom Construction and Cleaning Procedures
 - 3. Section 01112 – Cleanroom Certification and Acceptance
 - 4. Section 13036 – Cleanroom Wall Systems

1.4 SUBMITTALS

- A. Submit the following in accordance with Conditions of Contract, Shop Drawings:
 - 1. Show individual components and connections to adjacent construction.
 - 2. Show materials, thicknesses, and gauges.
 - 3. Indicate cutout locations and sizes in adjacent work, including templates, substrate preparation instructions, and directions for preparing cutouts and installing anchorage devices.

1.5 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing products specified in this Section with minimum of five (5) years' documented experience.
- B. Installer Qualifications: Certified in writing by system manufacturer as qualified for installation of specified systems.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Wall system panels shall be delivered with an approved protective coating and packaged to prevent dust from contaminating surfaces while in transit and during construction.
- B. Deliver materials in their manufacturer's original unopened packages.
- C. Unpacking shall be done outside the cleanroom area.
- D. Exercise extreme care in handling partition components to prevent damage.

1.7 SEQUENCING

- A. Coordination: Coordinate pass-thru unit locations, installation, and sequencing with other work to avoid interference and to ensure proper installation.

1.8 WARRANTY

- A. Provide written warranty jointly signed by manufacturer, installer and contractor agreeing to repair and/or replace assemblies, which fail in material or workmanship during warranty period of two (2) years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Products listed below are based on Terra Universal, Inc. as a standard of quality and design intent. Other acceptable manufacturers offering equivalent products include:
 - 1. Air Showers and Pass-Thrus, Inc. (AS/PT), Ontario, CA
 - 2. Scientific Air Systems, Inc., Portland, OR
 - 3. Lynndale Stainless, Phoenix, AZ
 - 4. Leatherwood, Dallas, TX

2.2 MATERIALS

- A. General: Provide manufacturer's units compatible with construction and features complying with manufacturer's published product literature, and as required for complete operating system.
- B. Model: Terra Universal Model 1992-14, wall mounted
- C. Stainless Steel Pass-Through Cabinets
 - 1. 1/16-inch-thick, stain-polished Type 316L stainless steel of double-skin construction; grind welds smooth and polish to match.
 - 2. Radius internal corners for easy cleaning.
 - 3. Front flange, 4 inches by ¼ inch, and loose flange of stain-finished stainless steel to seal unit to wall finishes; beveled on external edges with radiused corners.
- D. Doors:
 - 1. Stainless steel doors:
 - a. Radius external edges.
 - b. Stainless steel sections are bonded, welded, and braced internally to produce a rigid door panel.
 - c. Glazing: dissipative PVC
 - d. Stainless steel frame.
 - 2. Hardware:
 - e. Door Pulls, Guides and Latches: As required for a complete assembly.
 - f. Mechanical self-closing apparatus shall prevent open positioning of pass-through doors when not in use. Incorporate mechanical components within door assembly jamb cavities providing concealment from view.
 - 3. Glazing Splines, Seals, and Gasketing: Closed-cell poron polyurethane or neoprene.
- E. Conductivity: 10^6 to 10^8 ohms grounded with wall system

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Set components securely and accurately in place in accordance with manufacturer's instructions. Install units plumb, level and properly aligned with other components and other work. Anchor as required for secure operation, maintaining fire rating. Provide airtight seal between self-contained units.
- B. Complete field assembly with joints and seals as recommended by manufacturer.
- C. Thoroughly clean completed assembly.

3.2 FIELD QUALITY CONTROL

- A. Site Tests:
 - 1. Test pass-thru cabinet as well all doors and seals after cleanrooms are pressurized.
 - 2. Verify system is airtight.
- B. Perform general cleaning sequence as follows:
 - 1. Visual inspection per above.
 - 2. Vacuum removal of particulates.
 - 3. Solvent wipe cleaning.
 - 4. Vacuum removal of particulates.
 - 5. Visual inspection per above.
- C. Use low shedding or lint-free materials for wipe cleaning.
- D. Acceptable cleaning agents for metal surfaces include isopropyl alcohol (IPA), a 50/50 mixture of IPA, and deionized water.

3.3 DEMONSTRATION

- A. Instruct Owner's personnel in proper use and maintenance of pass-thru.

END OF SECTION 13070